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10/660,254

09/11/2003

Eric D. Groen

X-1359 US

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7590

01/25/2010

XILINX, INC

ATTN: LEGAL DEPARTMENT

2100 LOGIC DR

SAN JOSE, CA 95124

EXAMINER

VLAHOS, SOPHIA

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

01/25/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/660,254 | Applicant(s) GROEN ET AL. | |
| | Examiner SOPHIA VLAHOS | Art Unit 2611 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-14 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-6,8-14 and 19-23 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters:

Drawings

2. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: The prior art of the record fails to teach alone or in combination: A transceiver for processing high data rate serial data, comprising: a plurality of clock based functionalities; wherein each of the plurality of clock based functionalities performs processing of one of the first serial data and the second serial data in accordance with a clock chosen from among the first recovered clock, the second recovered clock and the reference clock, and wherein at least one of the plurality of clock based functionalities converts the first serial data to a

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second protocol based on the first recovered clock and transmits the first serial data, as converted, in the second protocol based on the second recovered clock, as recited in claim 1 and in combination with other elements of the claim.

Claims 1, 3-5 are allowed over prior art.

The prior art of the record fails to teach alone or in combination: A transceiver for processing high data rate serial data, comprising: a first clock based functionality, a second clock based functionality, and a third clock based functionality, wherein each of the first, second and third clock based functionalities concurrently performs processing functions on one of the first serial data and the second serial data in accordance with a clock chosen from among the first recovered clock, the second recovered clock, and the reference clock, and wherein at least one of: the first clock based functionality, the second clock based functionality, or the third clock based functionality, converts the first serial data to a second protocol based on the first recovered clock and transmit the first serial data, as converted, in the second protocol based on the second recovered clock, as recited by claim 6 and in combination with other elements of the claim.

Claim 6 is allowed over prior art.

The prior art of the record fails to teach alone or in combination: A transceiver comprising: a logic for selecting from the plurality of input serial data streams and for providing at least one outgoing serial data stream to an outgoing transmit block; wherein the logic provides each received input serial data stream of the plurality of input serial data streams to the outgoing transmit block in accordance with a clock chosen from

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among the plurality of recovered clocks and said reference clock, and wherein the logic converts at least one of the plurality of input serial data streams to a second protocol based on a first one of the plurality of recovered clocks and transmits the at least one of the plurality of input serial data streams in the second protocol based on a second one of the plurality of recovered clocks, as recited in claim 8 and in combination with other elements of the claim.

Claims 8-9 are allowed over prior.

The prior art of the record fails to teach alone or in combination: An integrated circuit, comprising: a programmable fabric portion comprising a plurality of clock based functionalities, wherein each of the clock based functionalities performs processing on the high data rate input data stream in accordance with a clock chosen from among the plurality of recovered clocks and a reference clock, wherein the programmable fabric portion converts the high data rate input data stream to a second protocol based on a first one of the plurality of recovered clocks and transmits the high data rate input data stream, as converted, in the second protocol based on a second one of the plurality of recovered clocks, as recited in claim 10 and in combination with other elements of the claim.

Claims 10-13 are allowed.

The prior art of the record fails to teach alone or in combination: A method of processing high data rate serial data, comprising: providing the first and second recovered clocks to a programmable fabric portion comprising a plurality of clock based functionalities;

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performing processing of the high data rate input data stream in each of the plurality of clock based functionalities in accordance with a clock chosen from among the recovered clocks, wherein the high data rate input data stream is received according to a first protocol and converted to a second protocol based on the first recovered clock; and transmitting the converted high data rate input data stream in the second protocol based on the second recovered clock, as recited in claim 14 and in combination with other elements of the claim.

Claim 14 is allowed over prior art.

The prior art of the record fails to teach alone or in combination: A method of processing high data rate serial data, comprising: providing the first and second recovered clocks and a reference clock to a plurality of clock based functionalities; within each of the plurality of clock based functionalities, choosing among the first and second recovered clocks and the reference clock for processing of one of the first serial bit stream and the second serial bit stream by each of the plurality of clock based functionalities; converting the first serial bit stream to a second protocol based on the first recovered clock; and transmitting the first serial bit stream, as converted, in the second protocol based on the second recovered clock, as recited in claim 19 and in combination with other elements of the claim.

Claims 19-21 are allowed over prior art.

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The prior art of the record fails to teach alone or in combination: A method of clock management in a processing block, comprising: providing the second clock to the fabric; providing a reference clock to the fabric; concurrently performing processing functions on one of the first data stream and the second data stream in the processing block by choosing, by each of the plurality of clock based functionalities, a clock from among the first and second clocks and the reference clock; converting the first data stream to a second protocol based on the first clock; and transmitting the first data stream, as converted, in the second protocol based on the second clock, as recited in claim 22 and in combination with other elements of the claim.

Claim 22 is allowed over prior art.

The prior art of the record fails to teach alone or in combination: A method for receiving and transmitting data, comprising: providing each input data stream of the plurality of input data streams to the at least one output port in accordance with a clock chosen from among the plurality of recovered clocks and a reference clock; converting at least one of the plurality of input data streams to a second protocol based on a first one of the plurality of clocks; and transmitting the at least one of the plurality of input data streams, as converted, in the second protocol based on a second one of the plurality of clocks; wherein the at least one output port comprises a number of output ports that corresponds to a number of input data streams of the plurality of input data streams, and wherein the method further comprises determining, for each input data stream of the plurality of input data streams, an output port and providing each input data stream

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of the plurality of input data streams to the determined output ports based upon a chosen one of the plurality of recovered clocks and the reference clock, as recited in claim 23 and in combination with other elements of the claim.

Claim 23 is allowed over prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ohtsuka et al. (U.S. 5,388,100)

Maeda (U.S. 6,618,455)

Mann et al. (U.S. 5,251,210)

Ducaroir (U.S. 6,167,077)

Wang et al. (U.S. 6,516, 952)

Nakatsunaga et al. (U.S. 6,408,011)

Mahajan et al. (U.S. 6,618,358)

Hashiguchi (U.S. 5,987,540)

Ducaroir (U.S. 6,341,142)

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Galutska (U.S. 5,519,693)

Jin et al. (U.S. 5,920,897)

Venkata et al. (U.S. 7,180,972)

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SOPHIA VLAHOS whose telephone number is (571)272-5507. The examiner can normally be reached on MTWRF 8:30-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SOPHIA VLAHOS/
Examiner, Art Unit 2611
1/8/2010
/Mohammad H Ghayour/

Supervisory Patent Examiner, Art Unit 2611